

**REMARKS**

Claims 1-18 are pending in the present application. Claims 1-11 were presented for examination as being directed to the elected embodiment. Claims 12-18 have been withdrawn but remain pending for rejoinder upon allowance of elected claim 1.

The instant amendment cancels claim 2 and adds new claims 19-20. Thus, claims 1 and 3-11 and 18-20 are presented for consideration upon entry of the instant amendment. Claims 1 and 18 are independent.

**Independent claim 1, as well as dependent claims 2 and 10-11, were rejected under 35 U.S.C. §102(a) over U.S. Patent No. 6,490,913 to Martin et al. (Martin).**

Independent claim 1 has been amended to include elements of claim 2, which has been cancelled. Thus, claim 1 now recites "a directing device for directing the conditioning medium flow" and that the directing device is "configured to direct the conditioning medium flow to flow at least partially against a sample carrier arranged in the climate compartment (emphasis added)".

The Office Action asserts, with respect to claim 1, that any air passing from the input tube 9 inherently flows at least partly against the sample stage 20.

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of

ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted).

"In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

Applicants submit that the Office Action has failed to provide a basis in fact or technical reasoning to support the determination that any air passing from the input tube 9 inherently flows at least partly "against" the sample stage 20.

Martin specifically discloses that the Atomic Force Microscope, or AFM, allows high-resolution imaging at the subnanometer level, and in a liquid environment at the atomic level. The basic objective of the operation of the AFM is to measure the forces (at the atomic level) between a sharp probing tip (which is attached to a cantilever spring) and a sample surface. The ability to image materials in a variety of environments, including under ambient conditions and in liquids, enables high resolution imaging of biomaterials and polymers without causing significant deterioration of the materials or introducing artifacts related to the extensive sample preparation used in other high resolution microscopes. See col. 1, lines 30-65.

Applicants submit that the Office Action's conclusion that the air input tube 9 of Martin inherently directs the conditioned air flow at least partly against the sample stage 20 is contrary to the disclosed functionality and purpose of such Atomic Force Microscopes. For example, Applicants submit that directing the flow from input tube 9 against the sample stage 20 would result disturbing the sample and/or probing tip, obviating the basic objective of AFM. Further, Applicants submit that directing the

conditioned air flow from input tube 9 at least partly against the sample stage 20 would obviate Martin's stated purpose of imaging the samples under ambient conditions and would introduce the artifact of deformation of the sample due to the directed flow to the sample.

Thus, Applicants submit that the conclusion made by the Office Action that any air passing from input tube 9 of Martin inherently flows at least partly "against" the sample stage 20 is, at best, unsupported by the disclosure of Martin and more likely specifically contrary to the disclosure of Martin.

Further, the Office Action asserts, with respect to the elements of claim 2 now incorporated into claim 1, that the tapped bores through which hose-barbs are secured for connecting input tube 9 inherently disclose a flow directing device.

Again, Martin simply does not disclose inherently or otherwise that input tube 9 causes the condition air to flow "against" the sample stage 20 and, thus, the threaded bores simply are not configured to achieve this function.

Rather, Martin merely discloses that these holes are entry and exit ports for humid air to flow into and out of the chamber. Thus, humid air, presumably with a controlled relative humidity percentage, can come in through the entry port and fill up the chamber volume as the ambient air evacuates through the exit port. This process will continue until an equilibrium humidity level is reached in the chamber, at which time, the humid air will continue to flow steadily through the entry port, into the chamber, and out the exit port. See col. 7, lines 48-59.

Applicants maintain that the threaded bore and hose barb to which input tube 9 is connected simply can not reasonably be asserted to be a "directing device" that is "configured to direct the conditioning medium flow to flow at least partially against a sample carrier arranged in the climate compartment" as in present claim 1.

Accordingly, Applicants submit that Martin does not disclose or suggest present claim 1. Thus, reconsideration and withdrawal of the rejection to claims 10-11 over Martin are respectfully requested.

**Independent claim 1, as well as dependent claims 2, 4, 7-8, and 10-11, were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 3,393,032 to Crisler et al. (Crisler). Dependent claims 3 and 6 were rejected under 35 U.S.C. §103(a) over Crisler in view of U.S. Patent No. 4,855,601 to Savoyet (Savoyet). Dependent claim 5 was rejected under 35 U.S.C. §103(a) over Crisler in view of U.S. Patent No. 4,817,447 to Kashima et al. (Kashima). Dependent claim 9 was rejected under 35 U.S.C. §103(a) over Crisler in view of U.S. Patent No. 4,843,893 to Huber et al. (Huber).**

Again, independent claim 1 recites "a directing device for directing the conditioning medium flow" and that the directing device is "configured to direct the conditioning medium flow to flow at least partially against a sample carrier arranged in the climate compartment (emphasis added)".

The Office Action acknowledges that Crisler does not expressly teach a sample carrier, rather asserting by Official Notice that such microscopes have microscopes. In accordance with 37 C.F.R. § 1.104 (d)(2) and to preserve Applicants argument on appeal, Applicants respectfully traverse this Officially Noticed assertion.

The Office Action asserts, with respect to claim 1, that any gas passing from pipe couplings 75 inherently flows at least partly against the samples in the undisclosed sample carrier.

"In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in

original).

Applicants respectfully ask, without disclosing the existence of a sample carrier and without disclosing the location of this missing sample carrier that it is impossible for the Office Action to provide a basis in fact and/or technical reasoning to reasonably support the conclusion that the gas passing from couplings 75 inherently flows at least partly against the samples in the undisclosed sample carrier.

Instead, Applicants submit that Crisler fails to disclose the position of the sample or sample carrier in the microscope 90, and the Officially Notice fails to assert where such a carrier, if present, is located with respect to the pipe couplings 75 and circulation ports 80 of unit 10. Thus, Crisler, alone or in combination with the traversed Officially Notice fails to provide an enabling disclosure with respect to asserting that its inert gas flows at least partially against a sample carrier as in claim 1.

Rather, and looking to Figure 3, Crisler discloses that the microscope 90 includes is well above the location of the pipe couplings 75 and circulation ports 80 such that any inert gas from these couplings and ports simply can not flow at least partially against a sample carrier as claimed.

Moreover, it is also clear from looking at Figure 3 that the pipe couplings 75 and circulation ports 80 of Crisler are separated from the microscope 90 by a wall with only hatch 95 being provided. Applicants submit that Crisler simply fails to disclose or suggest that pipe couplings 75 and circulation ports 80 could be assumed to be "a directing device" that is "configured to direct the conditioning medium flow to flow at least partially against a sample carrier" and this is particularly true given that the couplings and ports are divided from the microscope with only hatch 95 being provided therebetween.

Savoyet, Kashima, and Huber fails to cure the aforementioned deficiencies of Crisler.

Accordingly, Applicants submit that Crisler, alone or in combination with Savoyet, Kashima and/or Huber, does not disclose or suggest present claim 1. Thus, reconsideration and withdrawal of the rejection to claims 1 and 3-11 are respectfully requested.

**In view of the above, it is respectfully submitted that claims 1 and 3-11 of the present application are in condition for allowance. Further, Applicants request rejoinder and allowance of withdrawn claims 12-18 that depend from claim 1.**

Claims 19 and 20 have been added to point out various aspects of the present application. It is submitted that claims 19 and 20 are directed to the elected climate chamber of Group I. Support for claims 19 and 20 can be found in the specification at least at page 10, line 9 though page 11, line 27, as well as in Figures 1 and 2. No new matter is added.

Applicants specifically point out that claims 19 and 20 are not intended to be limited to the specific mechanisms of patentability previously argued with respect to any prior claims in this or any related applications. Accordingly, Applicants hereby rescind any disclaimer of claim scope and, thus, any prior art for which such a disclaimer was made to avoid may need to be revisited by the Examiner with respect to claims 19 and 20.

It is believed that claims 19 and 20 are in condition for allowance. For example, claim 19, in part, recites "an inlet opening defined in one of the first plurality of side walls, the inlet opening being configured to supply a conditioning medium flow against the optical device, the illumination device, and a lower side of the sample carrier at a flow approach angle relative to the horizontal between 30° and 60° (emphasis added)".

Applicants submit that the cited art fails to disclose or suggest the flow approach angle recited by claim 19. Claim 20 depends from claim 19 and is allowable for at least this reason.

In addition, claim 20 recites that "the first plurality of side walls are at an angle of more than 90° relative to each other and the second plurality of side walls are at an angle of more than 90° relative to each other", which is not disclosed or suggested by the cited art.

In view of the above, it is respectfully submitted that the present application is in condition for issuance. Such action is solicited.

If for any reason the Examiner feels that consultation with Applicants' attorney would be helpful in the advancement of the prosecution, the Examiner is invited to call the telephone number below.

Respectfully submitted,

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